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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/616,377	07/10/2003	Hiroaki Nemoto	NITT.0147	1283
38327	7590	10/28/2005	EXAMINER	
REED SMITH LLP			RICKMAN, HOLLY C	
3110 FAIRVIEW PARK DRIVE, SUITE 1400			ART UNIT	
FALLS CHURCH, VA 22042			PAPER NUMBER	

1773

DATE MAILED: 10/28/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

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<b>Office Action Summary</b>	<b>Application No.</b> 10/616,377	<b>Applicant(s)</b> NEMOTO ET AL.	
	<b>Examiner</b> Holly Rickman	<b>Art Unit</b> 1773	

**-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --**

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 21 June 2005.
- 2a) ☐ This action is **FINAL**.                      2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 2,3,5,6,8-11,13,14,16,17 and 19-22 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 2,3,5-6,8-11,13-14,16-17,19-22 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All    b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- |  |   |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892)   | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)                                   | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152)             |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)<br>Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____  |

## **DETAILED ACTION**

### ***Continued Examination Under 37 CFR 1.114***

1. A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on 6/21/05 has been entered.

### ***Claim Rejections - 35 USC § 112***

2. The rejection of claim 4 under 35 U.S.C. 112, second paragraph, is withdrawn in view of Applicant's amendments.

### ***Claim Rejections - 35 USC § 102/103***

3. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

4. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

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(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

5. Claims 2-3, 5-6, 8-11, 13-14, 16-17, and 19-22 are rejected under 35 U.S.C. 102(e) as anticipated by or, in the alternative, under 35 U.S.C. 103(a) as obvious over van de Veerdonk et al. (US 20030235717).

Van de Veerdonk et al. disclose a magnetic recording medium having a substrate, a soft magnetic layer having an oxide surface, a seedlayer and alternating layers of Co and Pt (or Pd). The Co layers contain an additive element such as Cu, Au, or Ag. The reference teaches that the Pt (or Pd) layers are as thin as 0.6 nm (see figures, paragraphs 16, 20-22, 31, 34). It is the Examiner's contention that the structure shown in figures 2-5 show a magnetic layer having grains which are more dense (i.e. compact) as compared to the continuous magnetic phase and a continuous nonmagnetic phase that is less dense (i.e. less compact/more spread out) compared to the magnetic grains.

Van de Veerdonk et al. teach all of the limitations of the claims as detailed above, except for: the claimed rate of coercivity decrease upon "extreme" temperature change from 25 to 70 °C, the claimed characteristics of the magnetic torque loop of the recording medium, and the value of the M-H slope parameter.

It is the Examiner's contention that the aforementioned property limitations are inherent in the structure taught by van de Veerdonk et al. by virtue of the fact that the reference teaches a recording medium that has the same structure and composition as the claimed recording medium. Specifically, the reference teaches a superlattice structure having Co based layers containing a non-magnetic grain boundary material, such as Cu, Au or Ag, alternating with Pt layers having a

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layer thickness of 0.6 or 0.8 nm. As noted in the specification (see p. 10, lines 11-19; p. 14, lines 22-25; p. 21, lines 3-5), the claimed properties noted above are present in superlattice structures of Co/Pt when the Pt layers have thicknesses of 0.8 nm or less and the Co layers (but not the Pt layers) are doped with a paramagnetic element such as Au, Ag or Cu. Thus, one of ordinary skill in the art would expect that the same structures formed from the same materials would exhibit the same properties.

It has been held that where claimed and prior art products are identical or substantially identical, or are produced by identical or substantially identical processes, the burden of proof is shifted to applicant to show that prior art products do not necessarily or inherently possess characteristics of claimed products where the rejection is based on inherency under 35 USC §102 or on prima facie obviousness under 35 USC §103, jointly or alternatively. *In re Best, Bolton, and Shaw*, 195 USPQ 430. (CCPA 1977).

With respect to the process limitations set forth in claims 2-3 and 21-22, there is no evidence of record to establish that the claimed process limitations result in a product that is materially different from that shown in the prior art. It has been held that when there is a substantially similar product, as in the applied prior art, the burden of proof is shifted to the applicant to establish that their product is patentably distinct not the examiner to show the same process of making. *In re Brown*, 173 USPQ 685 and *In re Fessmann*, 180 USPQ 324.

### ***Response to Arguments***

6. Applicant's arguments filed 8/4/05 have been fully considered but they are not persuasive.

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Applicant argues that in the claimed invention the magnetic moment in noble metal atoms is stable due to the claimed sputtering requirements whereas the magnetic moment of the noble metal atoms in the prior art is unstable. There is no evidence of record to support Applicant's position that an unexpected property is achieved via the claimed process limitations. As noted above, the examiner maintains that the prior art teaches a substantially similar product. The claimed properties and method of making the product do not patentably distinguish the present claims over Van de Veerdonk because there is no *evidence* of record to support applicant's arguments that the prior art is not capable of exhibiting the claimed properties (held to be inherent) and that the claimed method limitations result in a materially different product from that claimed.

Applicant also argues that Van de Veerdonk fails to provide "any disclosure to guide the thicknesses of the layers of the multilayer structure in a manner so as to create a relationship similar to the sputtering gas pressure  $P_o$  and the distance  $D_{TS}$  of the present invention." The examiner maintains that Van de Veerdonk discloses a thickness of 0.8 nm which is a thickness disclosed in the present specification (and in claim 10 of the instant application). Thus, the feature that Van de Veerdonk does not disclose is the claimed  $P_o$  and  $D_{TS}$  values. These values relate to the method of making the claimed structure. It has been held that even though product-by-process claims are limited and defined by the process, determination of patentability is based on the product itself. The patentability of a product does not depend on its method of production. If the product in the product-by-process claim is the same as or obvious from a product of the prior art, the claim is unpatentable even though the prior product was made by a different process. *In re Thorpe*, 777 F.2d 695, 698, 227 USPQ 964, 966 (Fed. Cir. 1985). The

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examiner again asserts that the present invention appears to be structurally and compositionally the same as the claimed invention. Therefore, it would inherently satisfy the property limitations set forth in the claims in the absence of *evidence* to the contrary.

7. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Holly Rickman whose telephone number is (571) 272-1514. The examiner can normally be reached on Monday-Friday 9:30-6:00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Carol Chaney can be reached on (571) 272-1284. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



Holly Rickman  
Primary Examiner  
Art Unit 1773